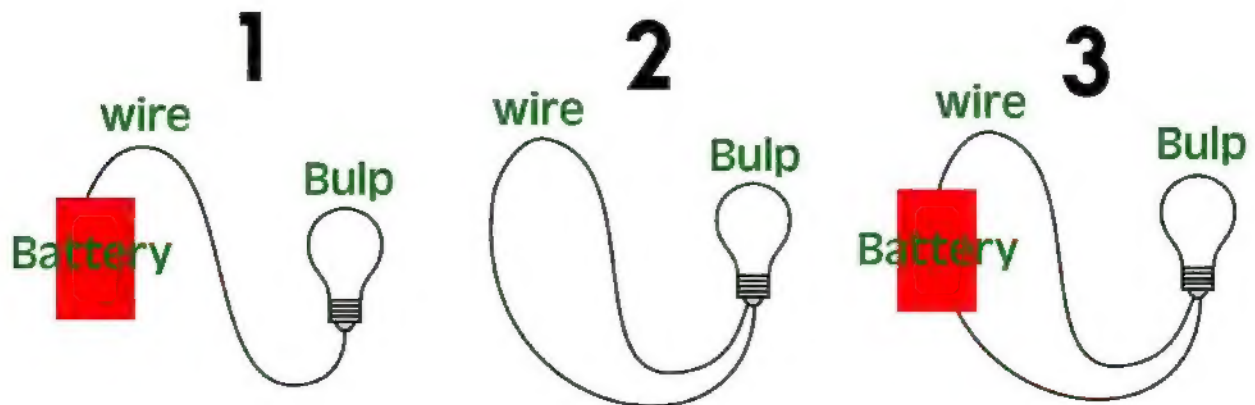


Science Performance tasks for grade six

Task (1) Electric circuit

you can use the student book page 56

1 - Examine the circuits in the diagram. Select the circuit that will cause the bulb to light up.



a - Circuit (1)

b - circuit (2)

c - circuit (3)

2- Complete the following sentences using the words between brackets:

(electricity – switch – closed – open)

1-Electric current flows through the electric circuit

2- is tool used to open and close the electric circuit

3-When electric circuit is, electric current doesn't flow and all light bulbs turns off

4- is a form of energy that comes from a flow of electric charges moving along a path

School:

Class:

Name:

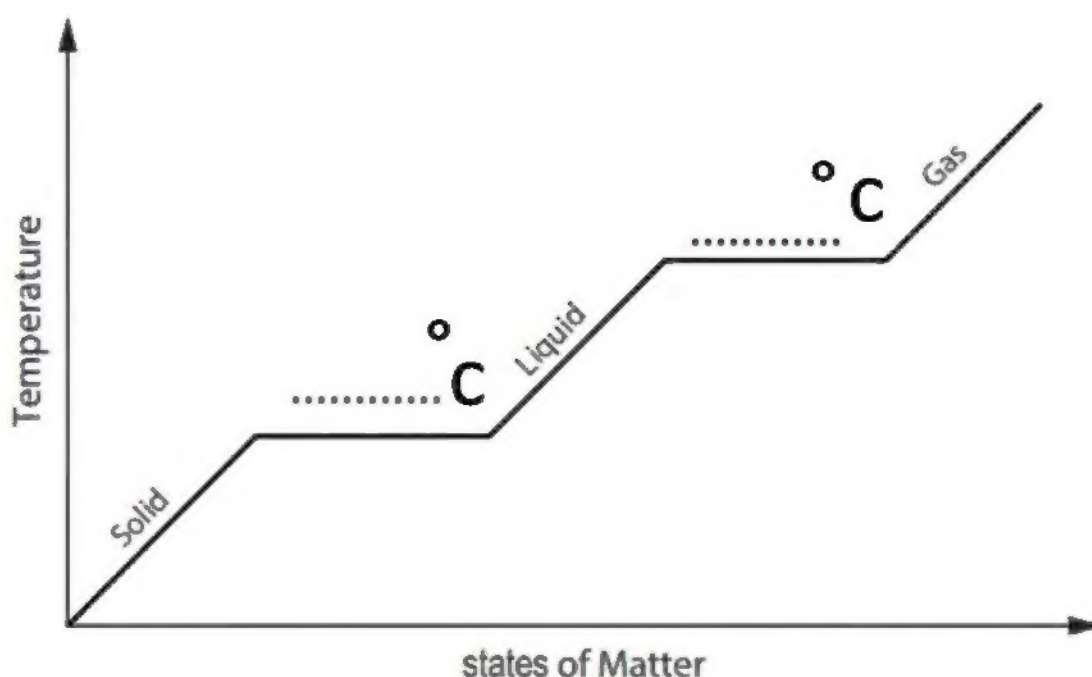
Subject:

Science Performance tasks for grade six

Task (2) Change of State of Matter

you can use the student book page 86

1- When the ice is heated until the ice completely melted, boiled, and then evaporated. The temperature of the water was recorded at regular intervals. This information is represented on the following graph. The statements below the graph describe this process. **Complete the following diagram with the suitable temperature for the change of state of matter :**



2- Complete the following sentences using the words between brackets:

(kinetic energy – boiling point – melting point – heat energy)

1. At first, the absorbed by water molecules when the beaker is heated is changed to
2. Matter changes from a solid state to a liquid state at
3. With enough heat, the forces become so weak, and the molecules spread so far apart, that the liquid water becomes a gas or water vapor. This is called the

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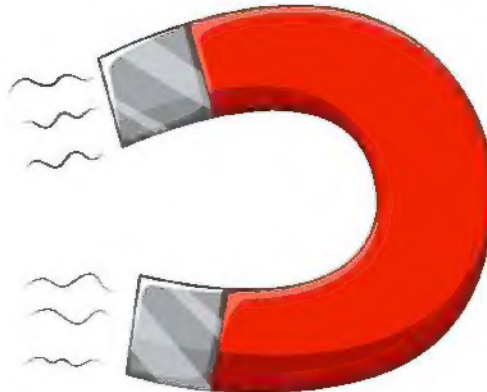
Science Performance tasks for grade six

Task (3) Magnetism and Electricity

you can use the student book page 53

1- Which of the following do magnets attract?

Select all that apply.



- a. aluminium
- c. wood
- e. plastic

- b. iron
- d. nickel
- f. gold

2- What do you already know about electricity and magnetism? Complete the paragraph using the word bank.

(metal core - electric current – magnetic field)

An is the movement of charged particles through a conducting wire. When an electric current flows through a wire, a is produced around the wire. If the wire is wrapped around a the magnetic field produced by the flowing current is strengthened.

School:

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Science Performance tasks for grade six

Task (4) Nervous System

you can use the student book page 29

1 - The nervous system is one system among several in the human body .To function, does the nervous system depend on other systems, such as the circulatory system or the digestive system? Do these systems depend on the nervous system? Explain your reasoning and give examples for each answer

.....

.....

.....

.....

.....



2- The movement of an arm to pick up a glass of water requires many events. Use the words from the word bank to complete each sentence in the paragraph.

(arm – brain – eyes – heart)

To pick up a glass of water, the first see the location of the glass on the table. The then coordinates the needed movement and sends instructions to muscles. The pumps more blood to feed the muscles required for movement.

Muscles in the then contract to move toward the water.



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Class:

Name:

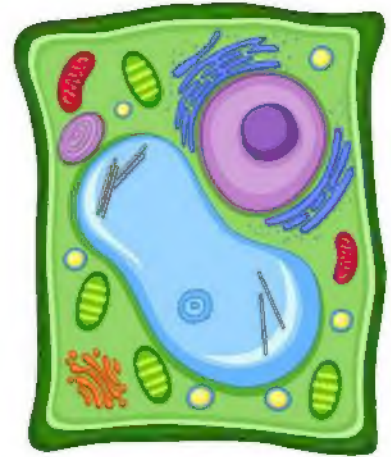
Subject:

Science Performance tasks for grade six

Task (5) Cell City

you can use the student book page 20

The following table shows some of the common organelles that you learned about in previous activities. The first three have been matched with a possible city structure that could represent the function of different parts of a cell. Emagine that you are engineer to brainstorm city structures that could model the function of each of the remaining organelles



Cell structures	City structure
Nucleus
Cell membrane
Mitochondria
Endoplasmic reticulum
Golgi apparatus
Vacuole
Cell wall (plants only)
Chloroplasts (plants only)

School:

Class:

Name:

Subject:

Science Performance tasks for grade six

Task (6) Properties of Heat

you can use the student book page 95

1- You know some basic information about heat transfer. Which of the following statements describes the properties of heat? Select all correct answers.

- A. Heat is an essential component of life on Earth.
- B. Heat is energy that flows from one object to another.
- C. Heat flows from a hotter object to a colder one.
- D. The more heat is transferred to an object, the slower its molecules move.
- E. Water freezes at 32°C .
- F. Heat is a type of matter.
- G. Heat cannot be lost, only transferred.



2- Does an object that feels cold to the touch contain thermal energy?
Explain your answer.

.....

.....

.....



School:

Class:

Name:

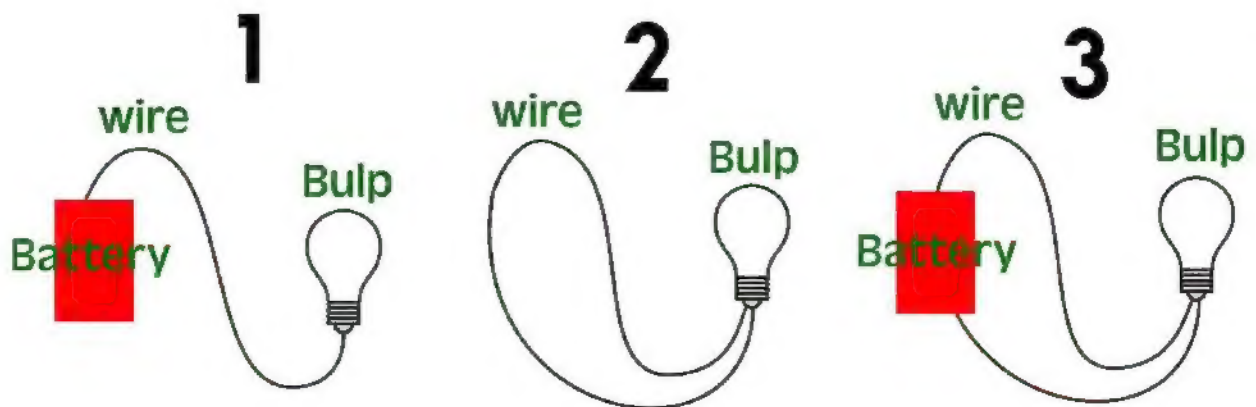
Subject:

Science Performance tasks for grade six

Task (1) Electric circuit

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2- Switch is tool used to open and close the electric circuit

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4- Electricity is a form of energy that comes from a flow of electric charges moving along a path

School:

Class:

Name:

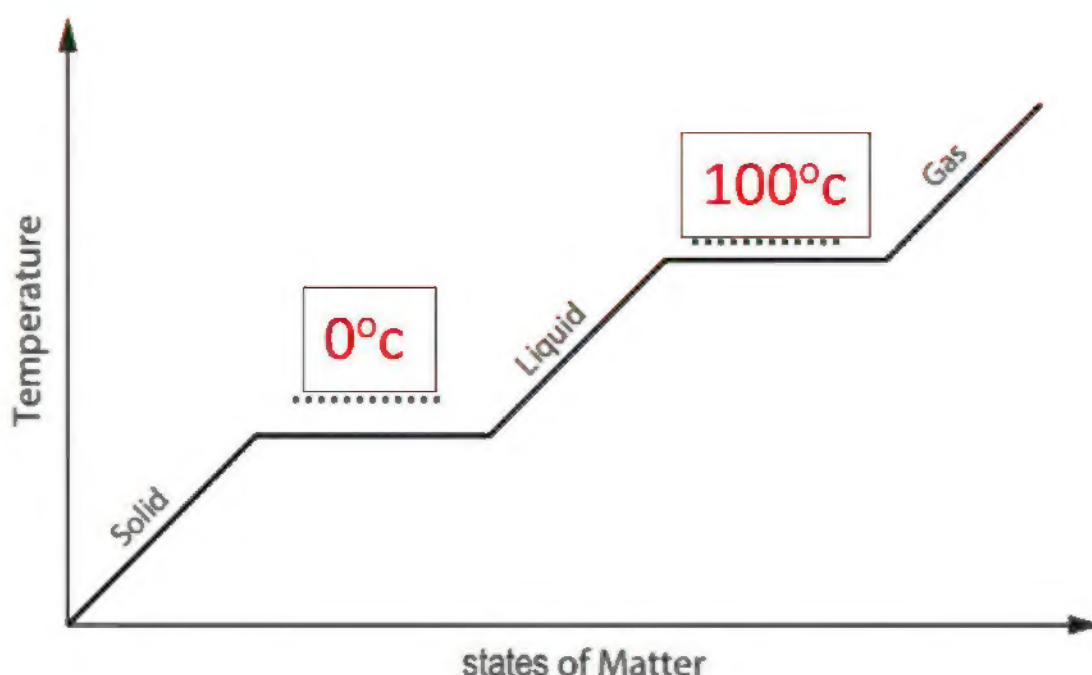
Subject:

Science Performance tasks for grade six

Task (2) Change of State of Matter

you can use the student book page 86

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2- Complete the following sentences using the words between brackets:

(kinetic energy – boiling point – melting point – heat energy)

1. At first, the heat energy absorbed by water molecules when the beaker is heated is changed to kinetic energy
2. Matter changes from a solid state to a liquid state at melting point
3. With enough heat, the forces become so weak, and the molecules spread so far apart, that the liquid water becomes a gas or water vapor. This is called the boiling point

School:
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Name:
Subject:

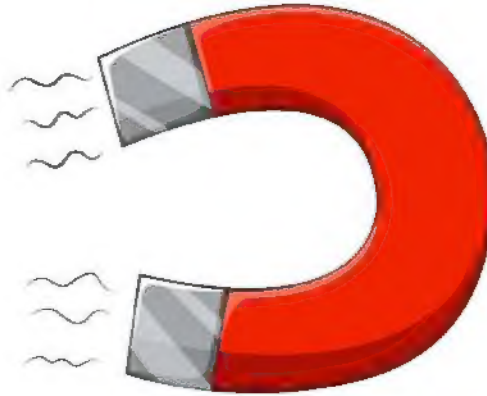
Science Performance tasks for grade six

Task (3) Magnetism and Electricity

you can use the student book page 53

1- Which of the following do magnets attract?

Select all that apply.



- a. aluminium
- c. wood
- e. plastic

- b. iron
- d. nickel
- f. gold

2- What do you already know about electricity and magnetism? Complete the paragraph using the word bank.

(metal core - electric current – magnetic field)

An electric current is the movement of charged particles through a conducting wire. When an electric current flows through a wire, a magnetic field is produced around the wire. If the wire is wrapped around a metal core the magnetic field produced by the flowing current is strengthened.

School:
Class:

Name:
Subject:

Science Performance tasks for grade six

Task (4) Nervous System

you can use the student book page 29

1 - The nervous system is one system among several in the human body .To function, does the nervous system depend on other systems, such as the circulatory system or the digestive system? Do these systems depend on the nervous system? Explain your reasoning and give examples for each answer

Nervous system depends on other systems such as circulatory system and digestive system

Example:

The nerve cells in the nervous system need nutrients

Digestive system digest food and it into nutrients

Circulatory system transfer nutrients to nerve cells



2- The movement of an arm to pick up a glass of water requires many events. Use the words from the word bank to complete each sentence in the paragraph.

(arm – brain – eyes – heart)

To pick up a glass of water, the eyes first see the location of the glass on the table. The brain then coordinates the needed movement and sends instructions to muscles. The heart pumps more blood to feed the muscles required for movement.

Muscles in the arm then contract to move toward the water.



School:

Class:

Name:

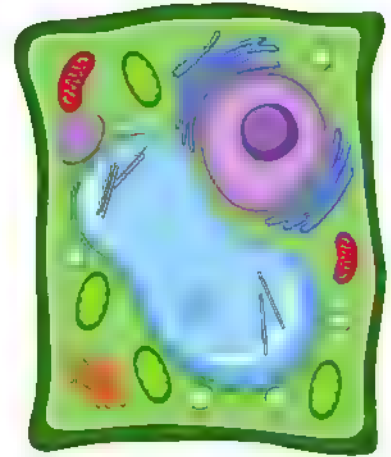
Subject:

Science Performance tasks for grade six

Task (5) Cell City

you can use the student book page 20

The following table shows some of the common organelles that you learned about in previous activities. The first three have been matched with a possible city structure that could represent the function of different parts of a cell. Emagine that you are engineer to brainstorm city structures that could model the function of each of the remaining organelles



Cell structures	City structure
Nucleus	<u>City hall</u>
Cell membrane	<u>Guards at city gates</u>
Mitochondria	<u>Electrical power station</u>
Endoplasmic reticulum	<u>Construction workers</u>
Golgi apparatus	<u>Post office</u>
Vacuole	<u>Storehouse</u>
Cell wall (plants only)	<u>A stone wall surrounding the city</u>
Chloroplasts (plants only)	<u>Food factory</u>

School:

Class:

Name:

Subject:

Science Performance tasks for grade six

Task (6) Properties of Heat

you can use the student book page 95

1- You know some basic information about heat transfer. Which of the following statements describes the properties of heat? Select all correct answers.

A. Heat is an essential component of life on Earth.

B. Heat is energy that flows from one object to another.

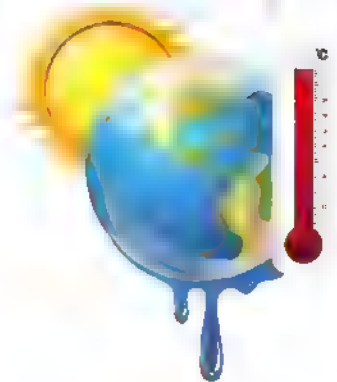
C. Heat flows from a hotter object to a colder one.

D. The more heat is transferred to an object, the slower its molecules move.

E. Water freezes at 32°C .

F. Heat is a type of matter.

G. Heat cannot be lost, only transferred.



2- Does an object that feels cold to the touch contain thermal energy? Explain your answer.

Yes, cold object contains thermal energy, because any object consists of particles in continuous motion, cold objects particles move slowly



School:

Class:

Name:

Subject:

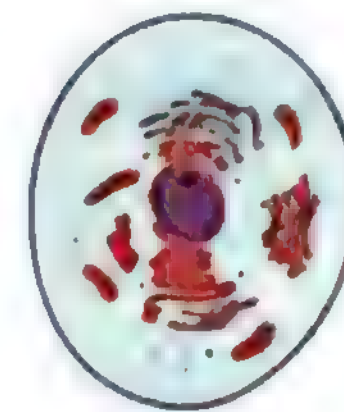
Look at the opposite figure, then answer the following questions :

1. This device is called
2. If the examined cell has a cell wall,
it may be a cell of
 - a. leaf.
 - b. lion's body.
 - c. human body.
 - d. mouse body.
3. This device must be used to see the structure of all the following
cells , except
 - a. plant cells.
 - b. human body cells.
 - c. unfertilized bird's egg.
 - d. bacteria cells.



Look at the opposite figure, which show the structure of different cells, then complete the sentences below :

The cell wall is found
in cell number only.



Cell ①
(Animal cell)

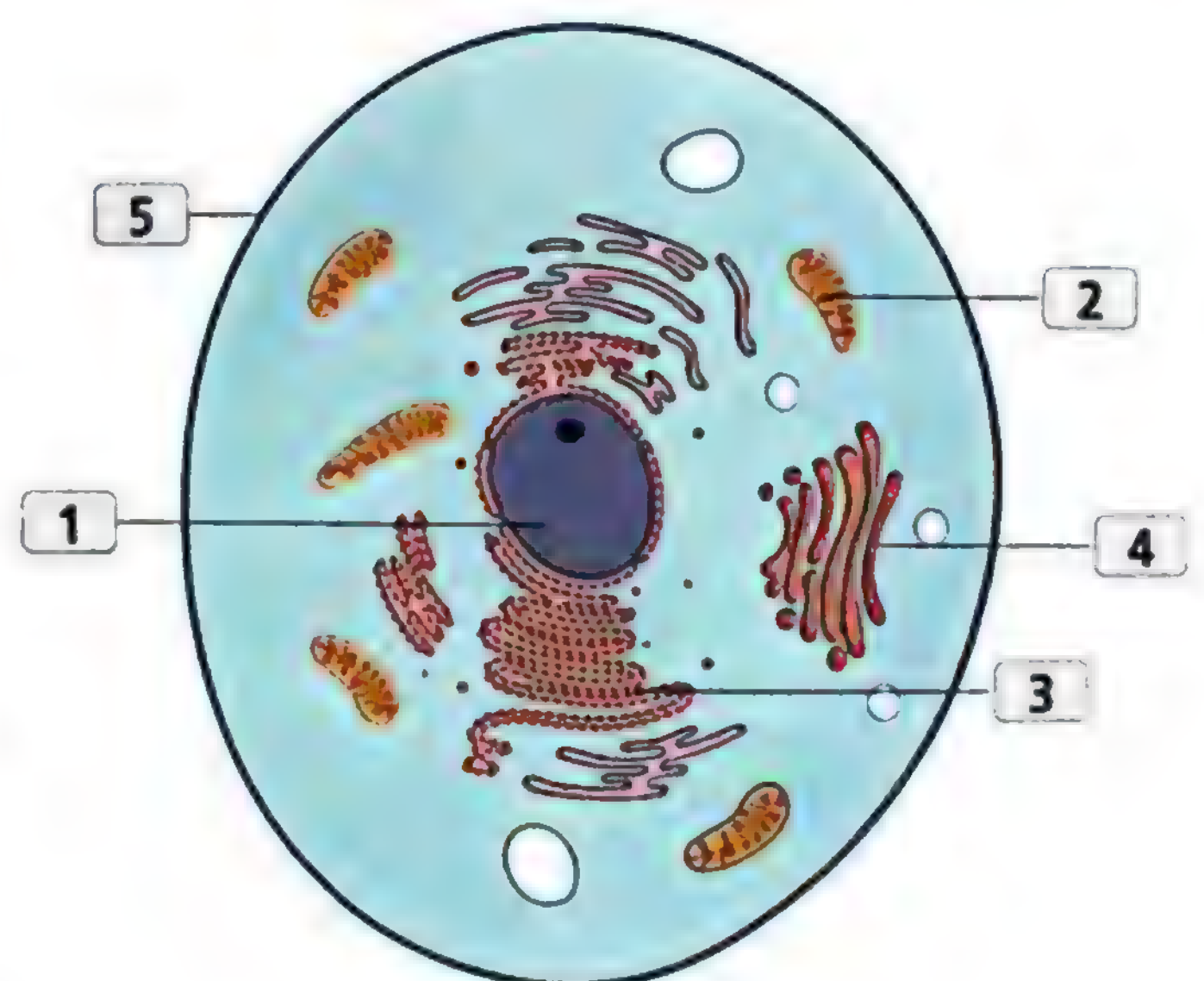


Cell ②
(Plant cell)





2. By examining a part of your skin under microscope you can see the same structure of the cell number

Look at the following figure, then write the correct number beside the suitable sentence :

1. Powerhouses in the cell. (.....)
2. Control the cell division. (.....)
3. Assembling and transporting proteins. (.....)
4. Control the selective permeability feature. (.....)
5. Packing and transporting different materials. (.....)



Choose from column (B) what suits it in column (A) :

(A)	(B)
1. A cell	a. 
2. A tissue	b. 
3. An organ	c. 
4. A system	d. 

1.

2.

3.

4.

Look at the opposite figure, then complete the following sentences :

1. Structures number and are found in plant cell only.

2. Structures number , and are found in both plant cell and animal cell.

3. Structure number acts like the city hall in cities.

4. Structure number is considered as the food factory of plant cell.



Use the following systems to complete the table below :

(you can use the same system more than once)

(Digestive system – Circulatory system – Nervous system)

Description	Name of system
1. It controls the muscles of stomach.
2. It transmits nutrients from digestive system to the nerve cells.
3. It provides the muscles of heart with its needed food.
4. It controls the muscles of heart.
5. They help in providing and transmitting the nutrients to the muscles of arms.

Look at the following figures, then complete the following sentences :



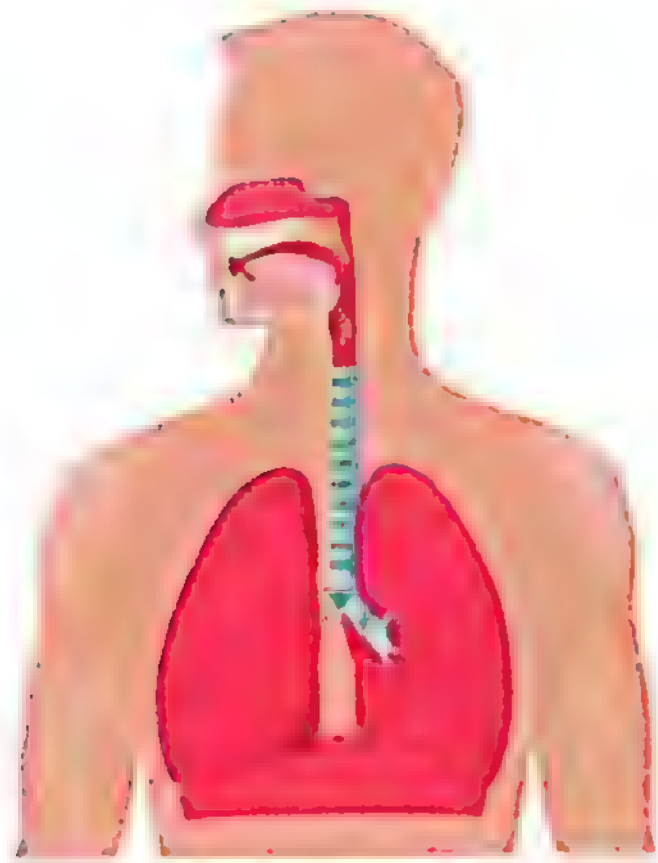
Figure (A)



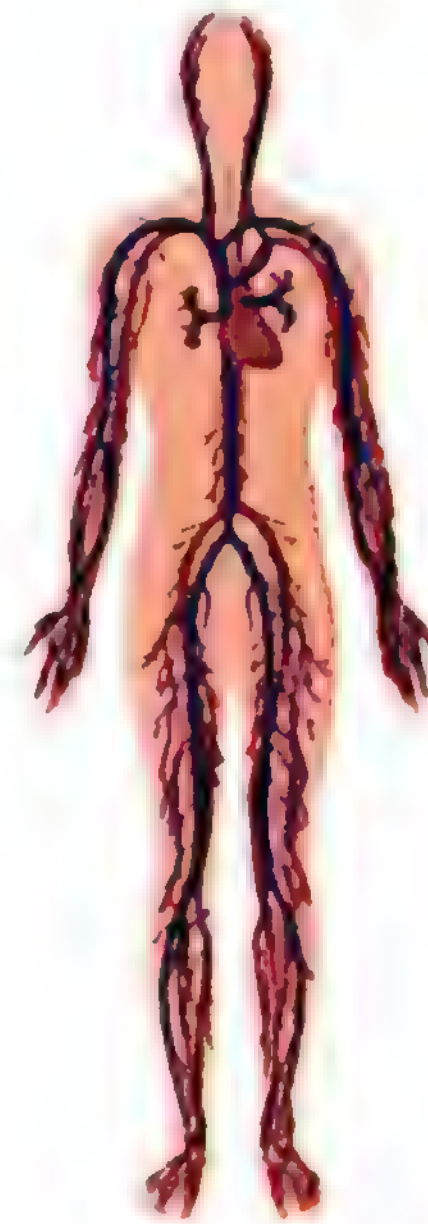
Figure (B)

1. The forearm in figure moves up toward your shoulder.
2. The forearm in figure moves down away from your shoulder.
3. The muscles in front of the upper arm contract in figure and relax in figure
4. The muscles in the back of the upper arm contract in figure and relax in figure

The following figures show some human body systems, if a person is subjected to an accident while he is riding a bicycle, complete the sentences below :



System (1)

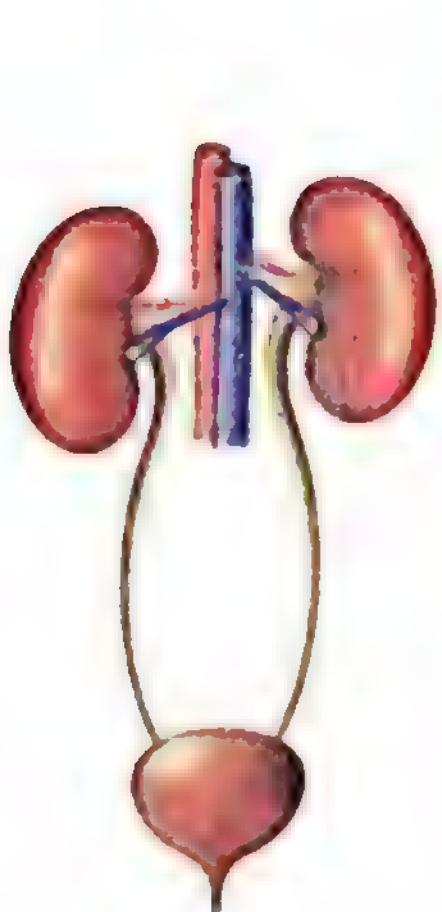


System (2)

1. System number helps endocrine system in carrying hormones to the muscles and brain of the person.
2. Heart that belongs to system number begins to beat quickly.
3. System number contains diaphragm muscle which contracts and relaxes many times to increase the breathing rate.
4. Both system number (1) and (2) help gas to reach muscles and brain of the person.

Write each of the following organs below the system that belongs to :

(Heart – Lungs – Kidneys – Stomach)



1.



2.



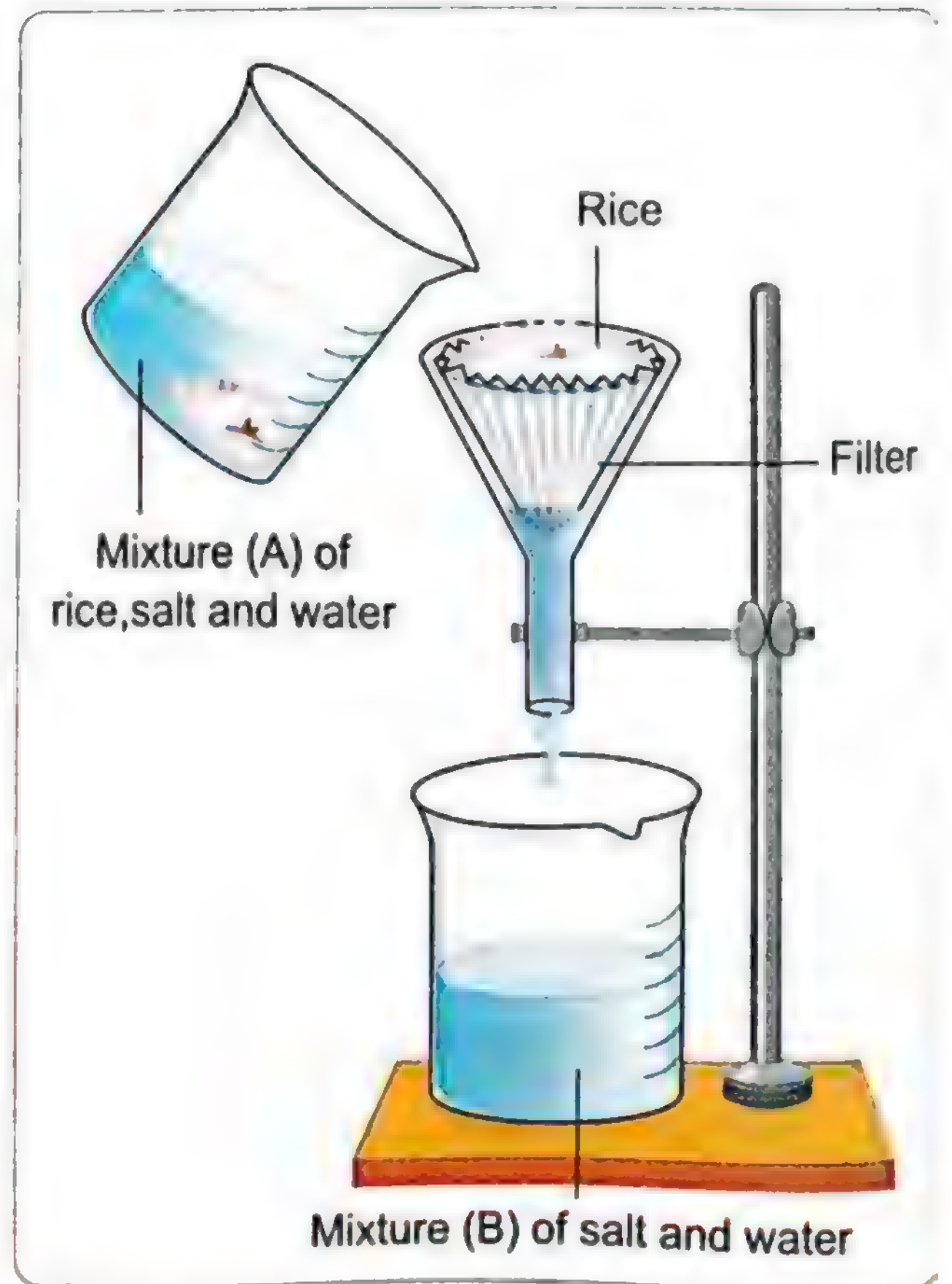
3.



4.

6 Look at the opposite figure, then choose the correct answer from those between brackets :

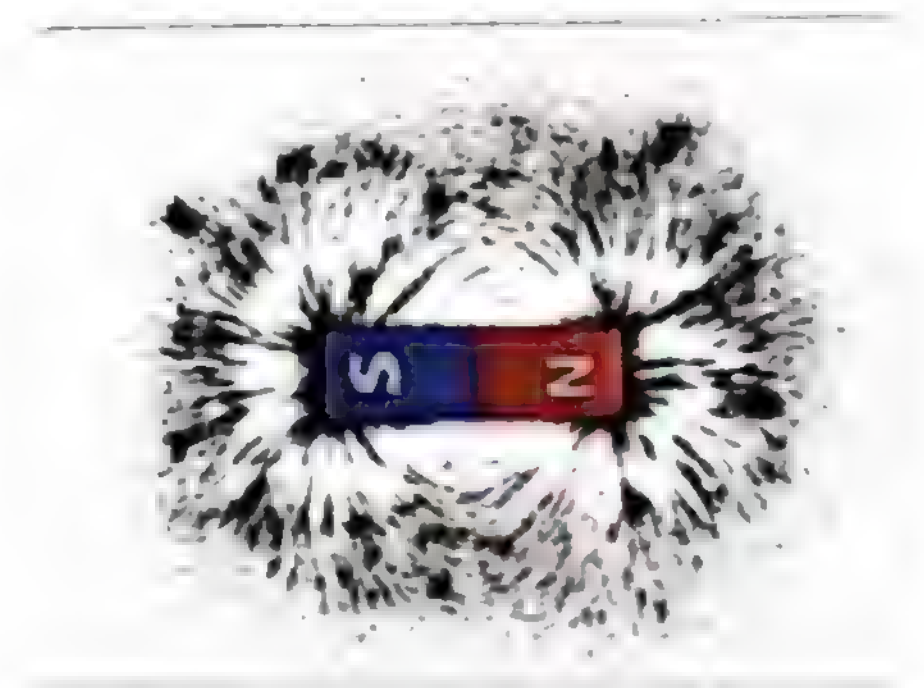
1. The filter in the opposite figure is like organ in the urinary system.
(stomach – kidney)
2. Mixture (A) is like which is found in the body.
(blood before filtering – blood after filtering)
3. Mixture (B) is like that comes out from the body. (filtered blood – urine)
4. Rice in the opposite figure is like which cannot pass through nephrons during filtration of blood. (proteins – urea)



8 Complete the following sentences using the words below :

(iron filings – magnet – magnetic field – iron)

1. This tool is called and it is made of
2. This tool is surrounded by an area called
3. We can observe the force of this tool by using which make pattern around it.



8 From the opposite figure, choose the correct answer :

1. Material number (s) will be attracted to the magnet.

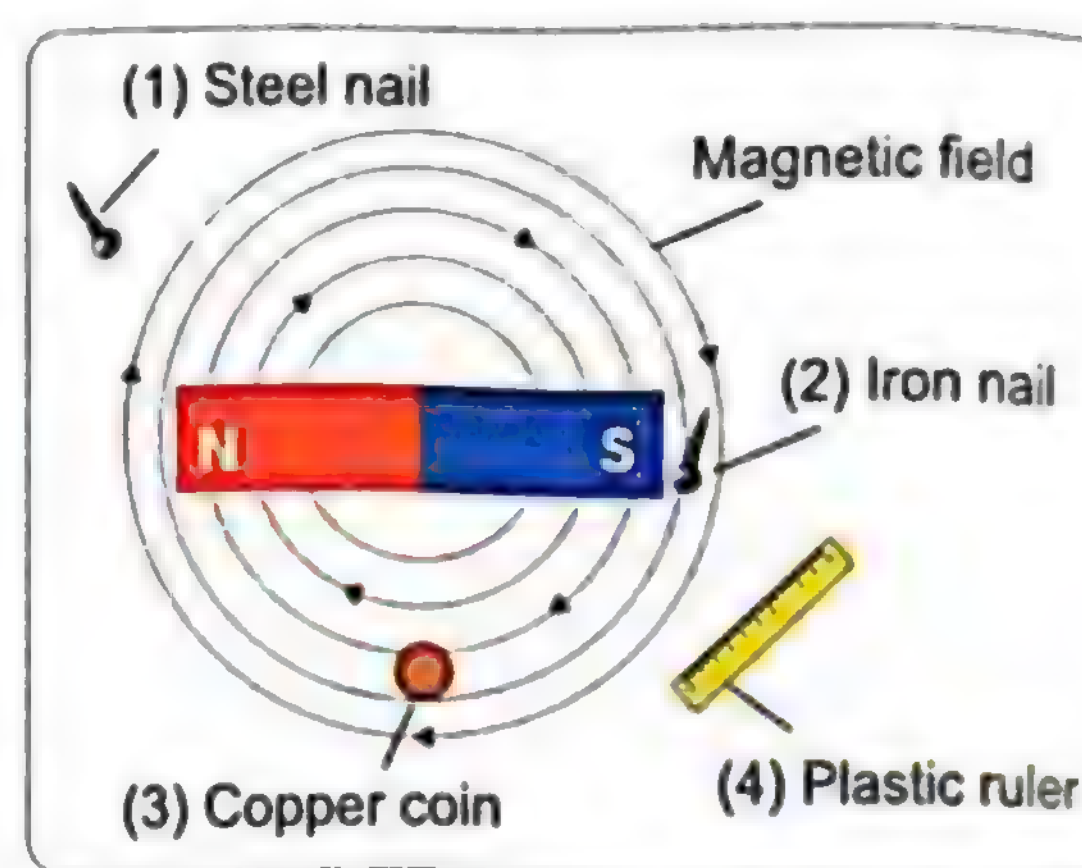
- | | |
|-------------|---------------------|
| a. (1) only | b. (1) and (2) only |
| c. (2) only | d. (3) and (4) only |

2. Which of these material are considered as magnetic materials ?

- | | |
|----------------------|----------------------|
| a. (1) and (2) | b. (3) and (4) |
| c. (1) , (2) and (3) | d. (1) , (3) and (4) |

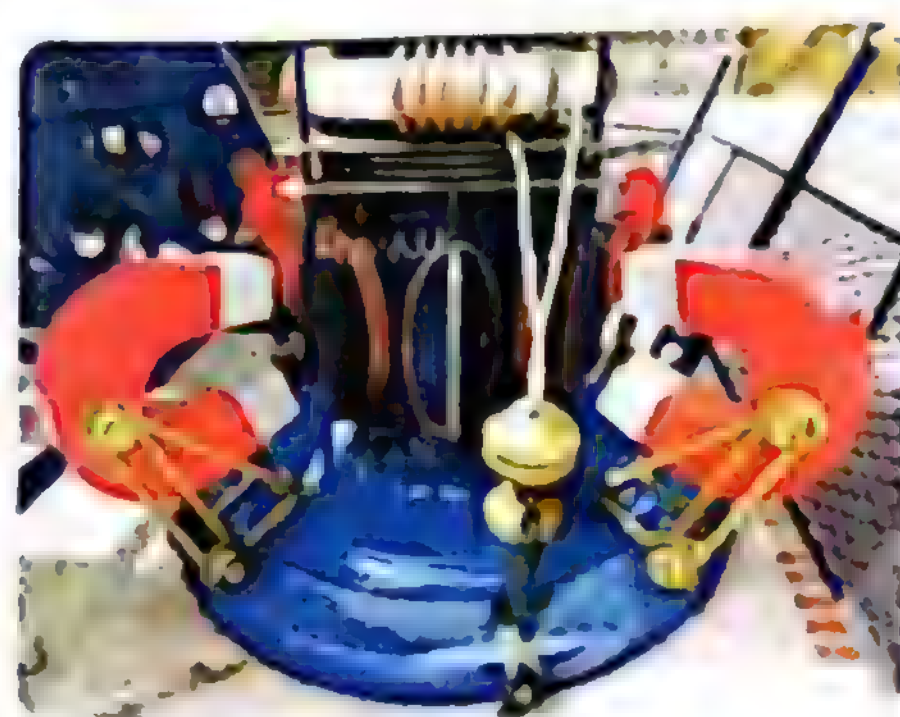
3. Which of these materials are considered as non-magnetic materials ?

- | | |
|----------------------|----------------------|
| a. (1) and (2) | b. (3) and (4) |
| c. (1) , (2) and (3) | d. (1) , (3) and (4) |



8 Look at the opposite figure then answer :

- This device is called
- It consists of and
- The idea of its work is changing energy into energy.
- This device is used in and



9 Look at the opposite figure, then answer the questions :

a. Label the figure :

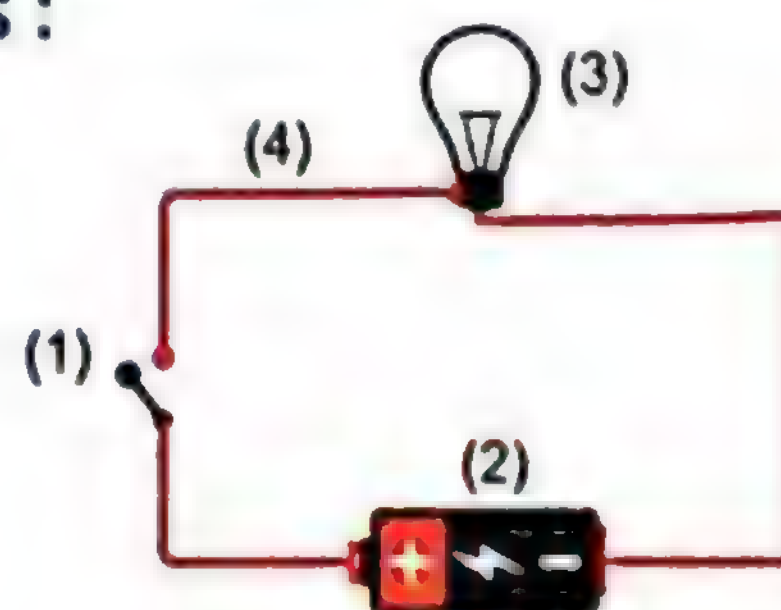
- | | |
|---------|---------|
| 1. | 2. |
| 3. | 4. |

b. What is the function of device number ?

- | | |
|---------|---------|
| 1. | 2. |
|---------|---------|

c. What happens if device number (1) is closed ?

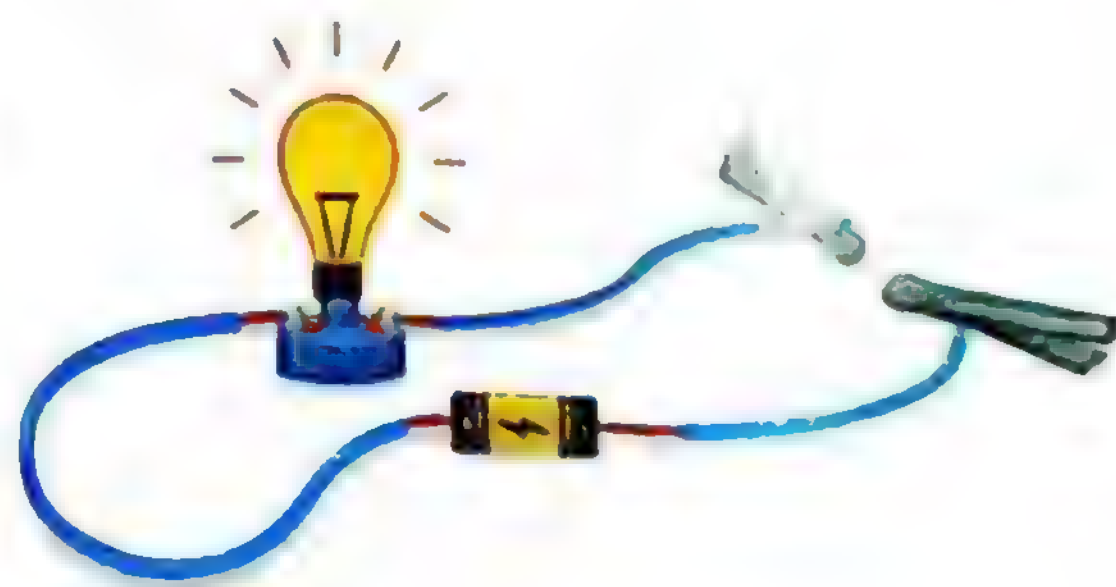
.....



6 Look at the opposite figure, then answer :

Classify the following materials into materials that will close the circuit and others will not close it ? giving reason ?

(Iron nail – plastic spoon – Rubber – Metallic spoon – Piece of wood – Metallic key)



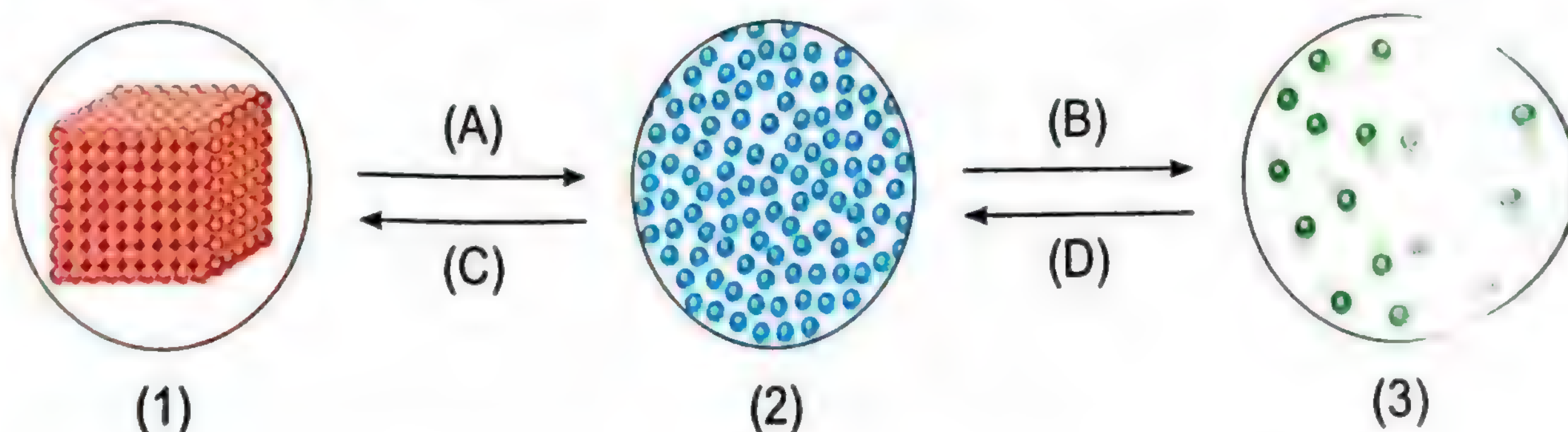
1. The materials which will close the circuit :

.....
The reason :
.....

2. The materials which will not close the circuit :

.....
The reason :
.....

8 Study the following figures that represents molecules of the three states of water then put (✓) or (X) :



1. Process (B) is called evaporation, while process (C) is called freezing. ()
2. Water can be changed from state (2) to state (3) by cooling, while it can be changed from state (2) to state (1) by heating. ()
3. During process (A), the molecules absorb thermal energy and move faster. ()
4. During process (D), the force that holds molecules together decreases so, they vibrate slower. ()

7 Look at the following figures then answer :

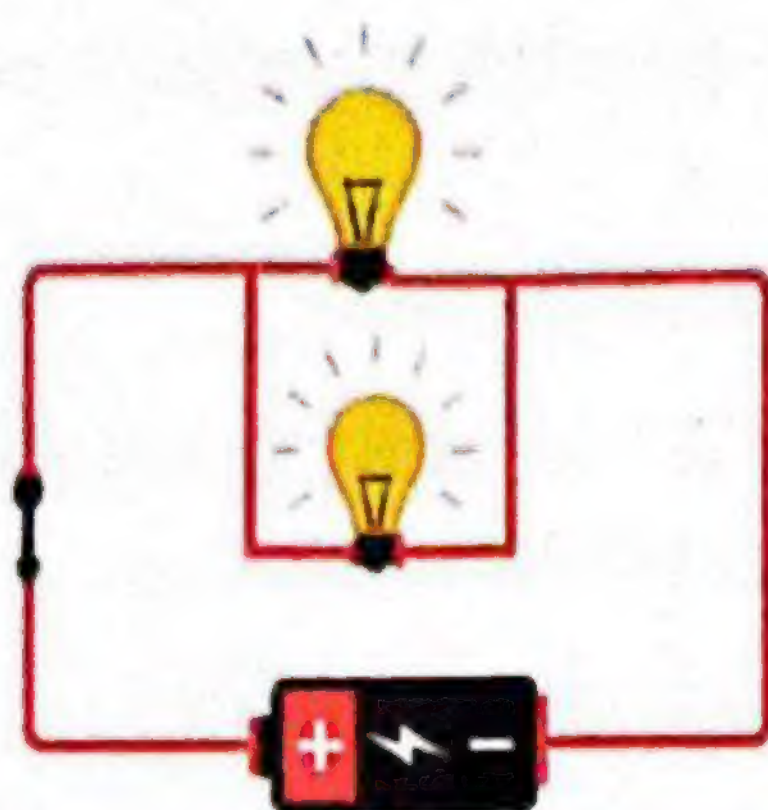


Figure (A)

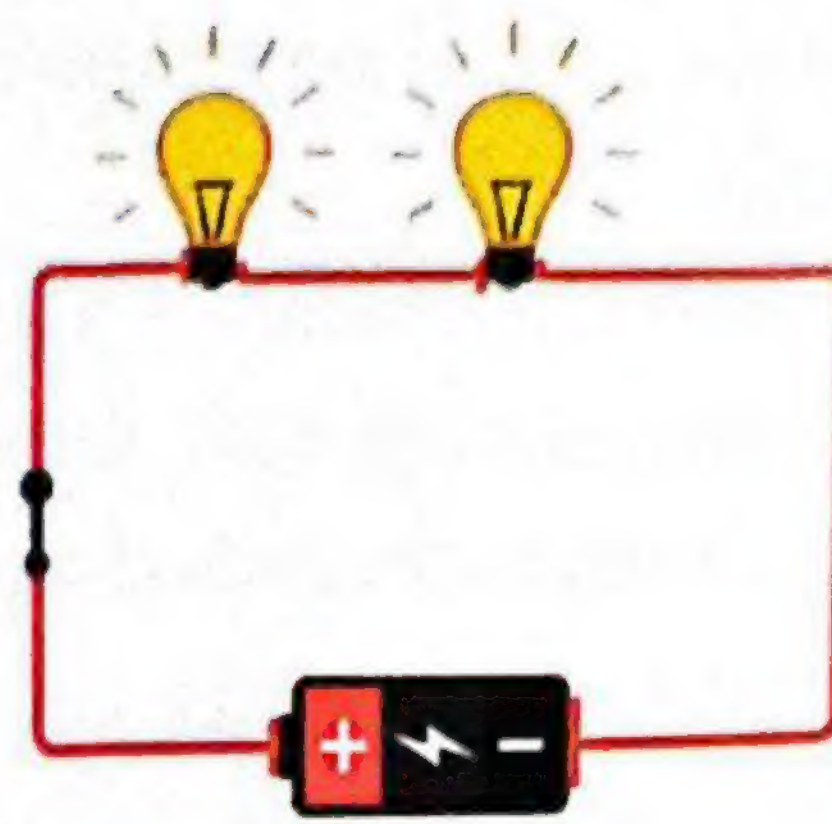


Figure (B)

a) Choose :

1. Which of these figures is a series circuit ?
2. Which of these figures is a parallel circuit ?

(Figure A – Figure B)

(Figure A – Figure B)

b) Put (✓) or (X) :

1. If we remove a lamp from the circuit in figure (A), the other lamp will still lit. ()
2. If the switch in figure (B) is replaced by a metallic paper clip, all lamps will turn off. ()

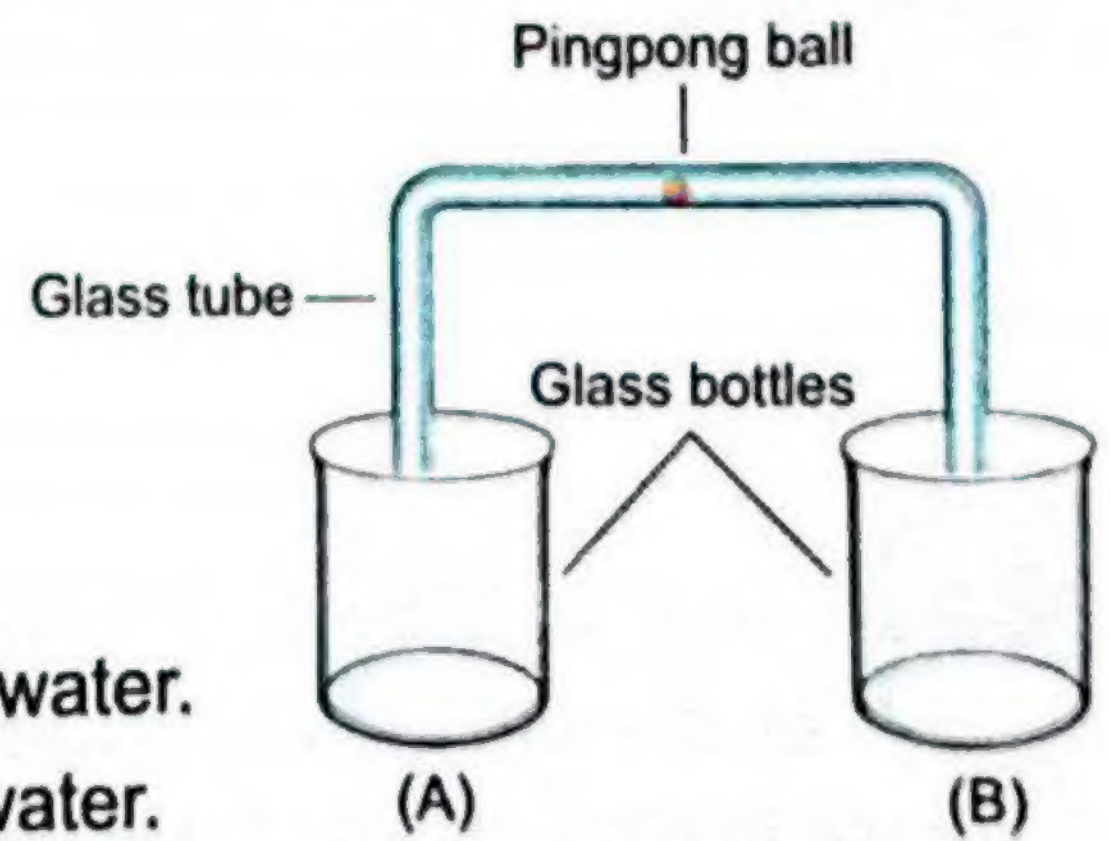
7 Look at the opposite picture that represents wet clothes that are put on a washing line to dry, then put (✓) or (X) in front of the following sentences :

1. Water in the clothes turns into water vapor in the air as they dry. ()
2. Molecules of water in the clothes move slower after changing into water vapor. ()
3. The change of state of water from liquid state to gas state is known as evaporation. ()
4. The kinetic energy of water molecules is greater than that of water vapor molecules. ()



9 Look at the figure below that shows 2 empty glass bottles connected by a glass tube with a pingpong ball in the tube :

- Without breaking the glass tube, which way will cause the small ball to move nearer to bottle B ?



- a. Put both bottles (A) and (B) into a basin of cold water.
- b. Put both bottles (A) and (B) into a basin of hot water.
- c. Put bottle (A) into a basin of hot water and bottle (B) into a basin of cold water.
- d. Put bottle (A) into a basin of cold water and bottle (B) into a basin of hot water.

10 Look at the figures below that show a metallic ball that can pass through the ring easily. When the ball is heated, the ball cannot pass through the same ring.



Complete the following sentences using the words below :

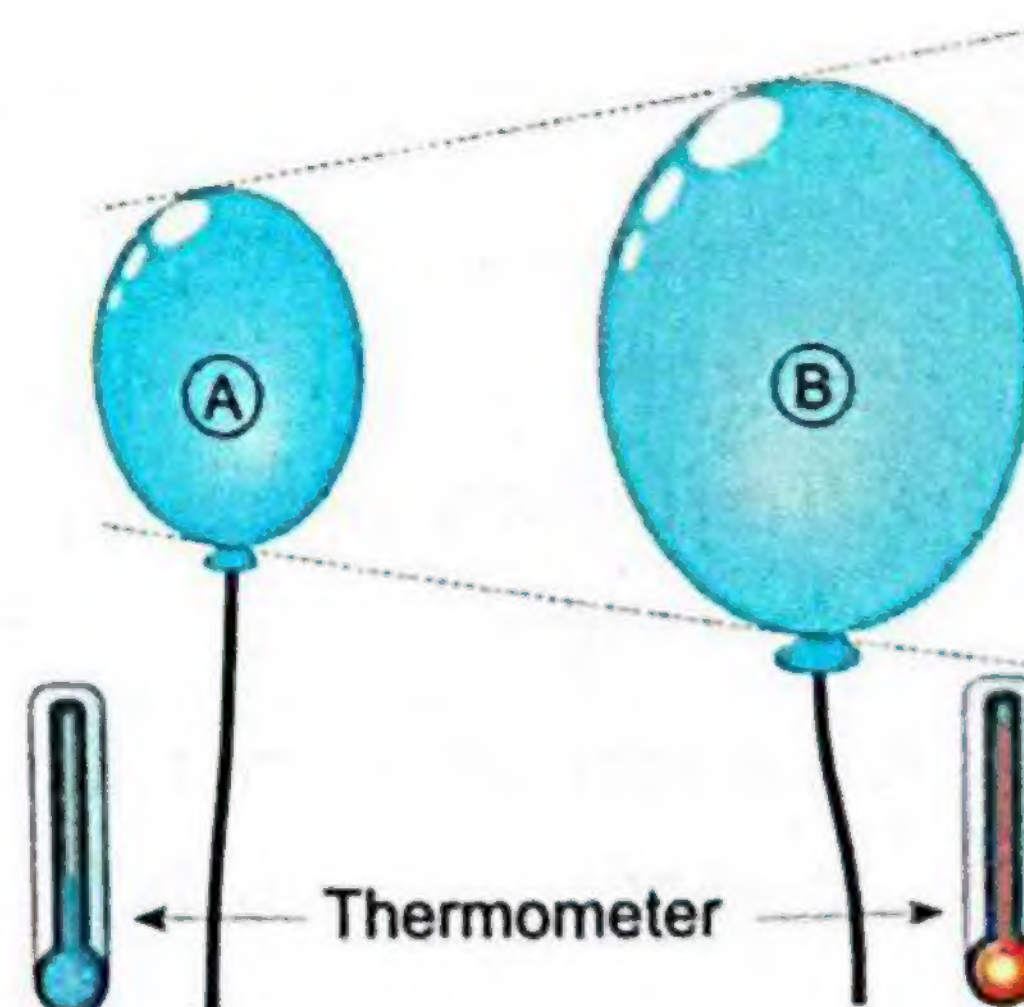
(heat – cool – expansion – contraction – kinetic)

- 1. When we the ball, the energy of its molecules increases.
- 2. After heating the ball, the ball cannot pass as a result of its
- 3. If we the ball, it can pass through the ring again as a result of its

7 Look at the picture below that shows 2 similar inflated balloons (A) and (B), If one of them is placed in a low temperature place and the other is placed in a higher temperature place.

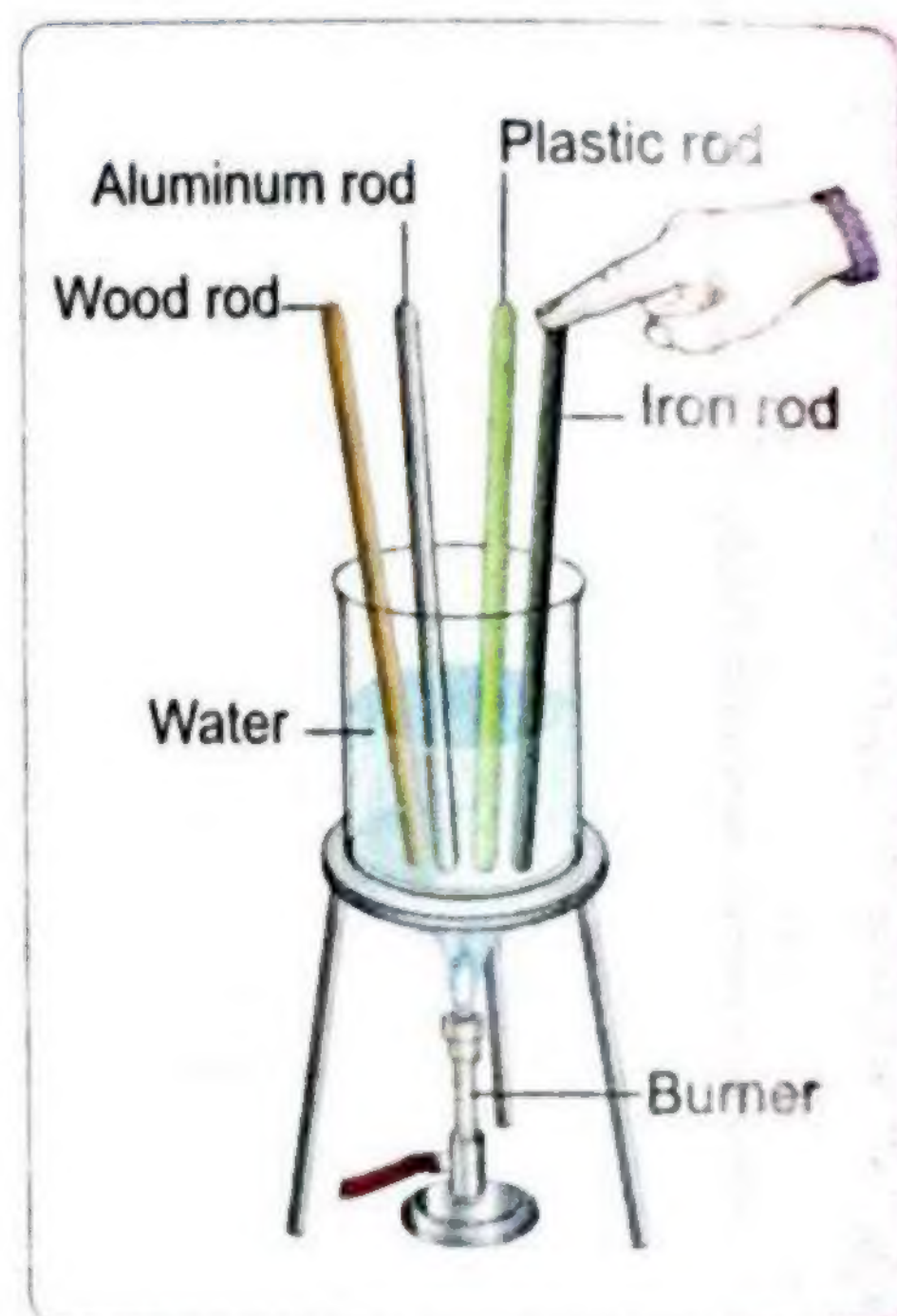
- Put (✓) or (X) :

1. Molecules of air move in balloon (A) faster than in balloon (B). ()
2. Spaces between molecules of air in balloon (B) are greater than that of air in balloon (A). ()
3. Air expands in balloon (A) and contracts in balloon (B). ()



9 Look at the opposite figure then choose the correct answer :

1. Heat transfers through water molecules by
 a. convection. b. conduction.
 c. freezing. d. radiation.
2. Heat transfers through aluminum rod by
 a. convection. b. conduction.
 c. boiling. d. radiation.
3. and rods slow down the heat transfer through them.
 a. Iron – wood b. Plastic – wood
 c. Iron – aluminum d. Plastic – aluminum
4. and rods are good conductors of heat.
 a. Iron – wood b. Plastic – wood
 c. Iron – aluminum d. Plastic – aluminum



- 7** Look at the following graphs which show the temperatures of two substances before and after mixing them together, then answer the questions below :

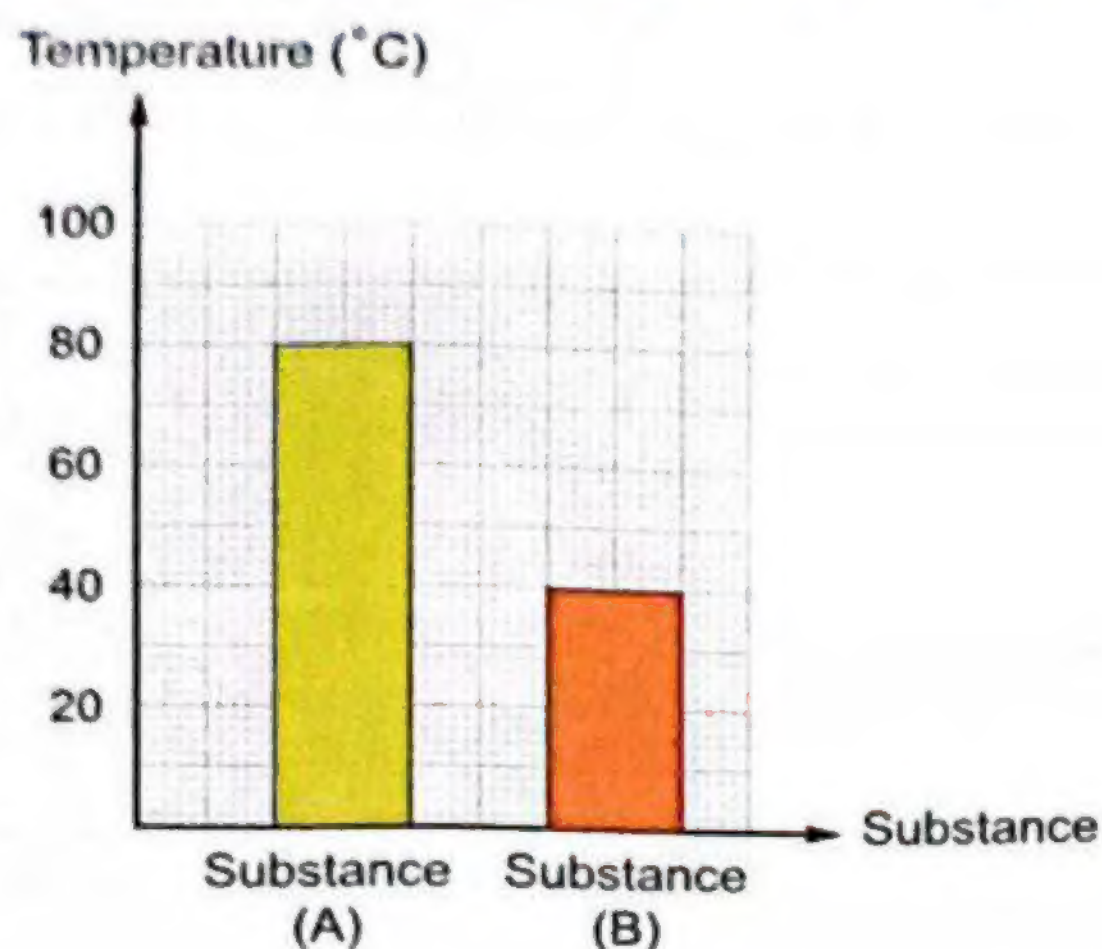


Figure (1)

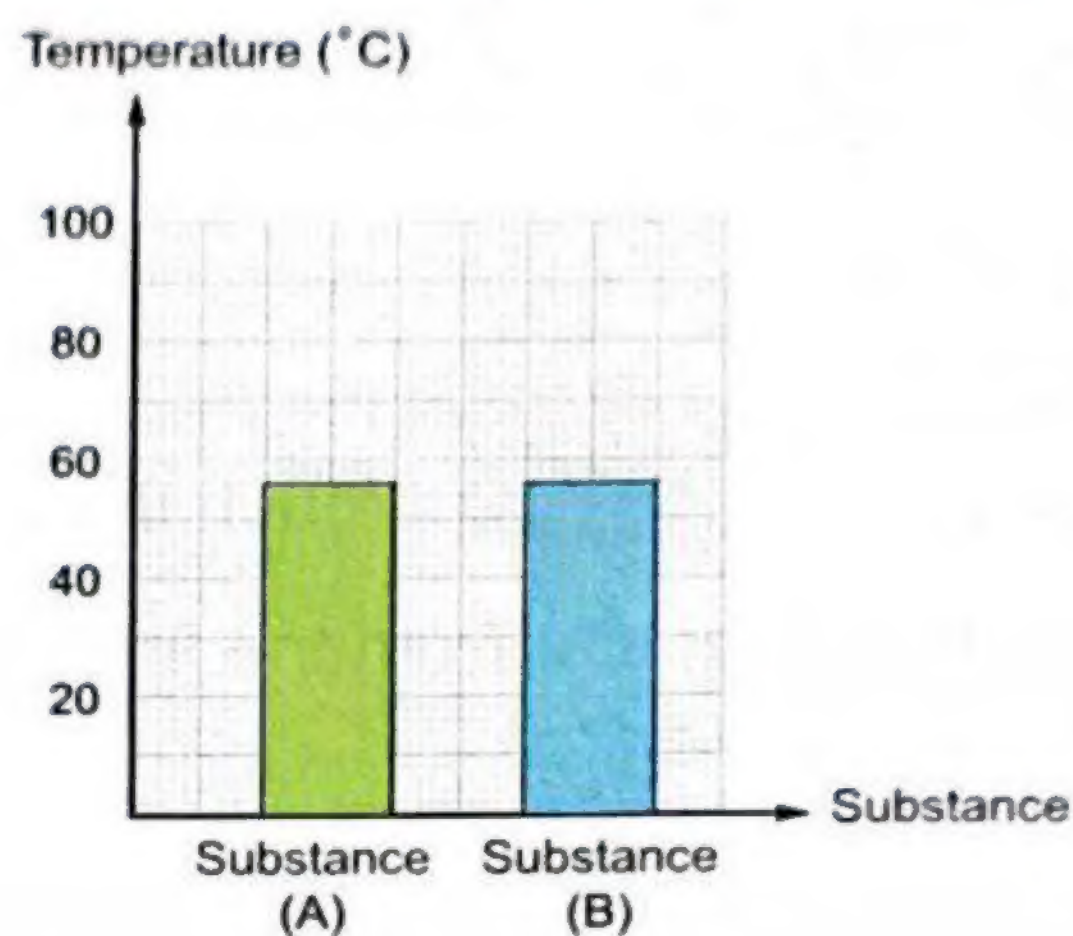


Figure (2)

(A) Complete :

- Figure (.....) represents the mixture at thermal equilibrium.
- In figure (1) molecules of substance (.....) move slower than that of substance (.....).
- In figure (2) molecules of substance (.....) move slower after mixing, while molecules of substance (.....) move faster after mixing.

(B) Choose :

- According to figure (1), the final temperature of substance (A) and substance (B) will be between°C and°C
 - 20 – 40
 - 40 – 80
 - 80 – 100
 - 10 – 20
- The temperature at thermal equilibrium of two substances may equal°C
 - 40
 - 80
 - 56
 - 120

- 8** Look at the following figures, then complete the sentences below :

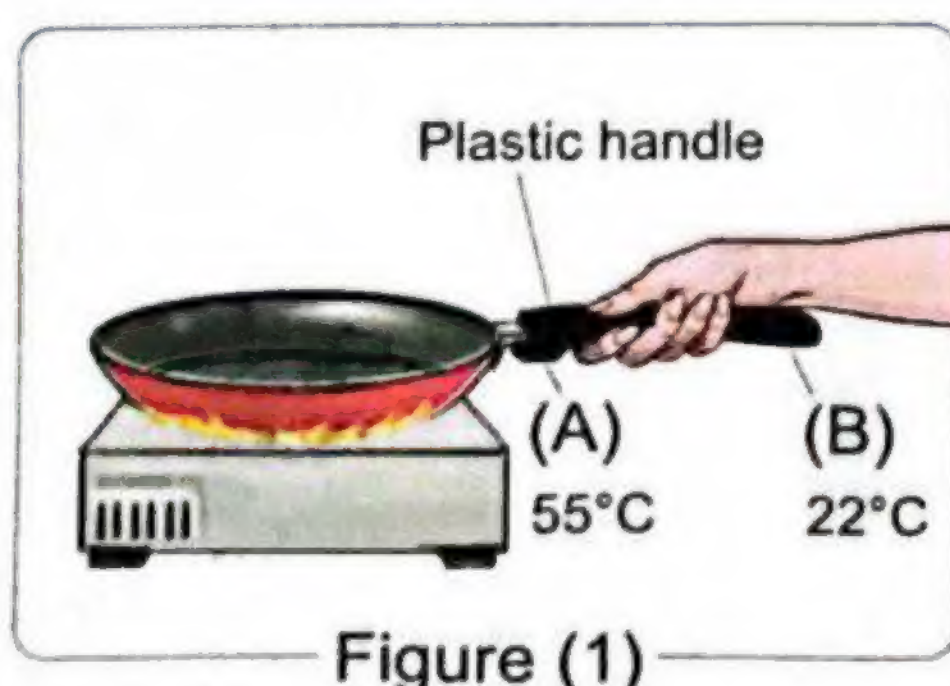


Figure (1)

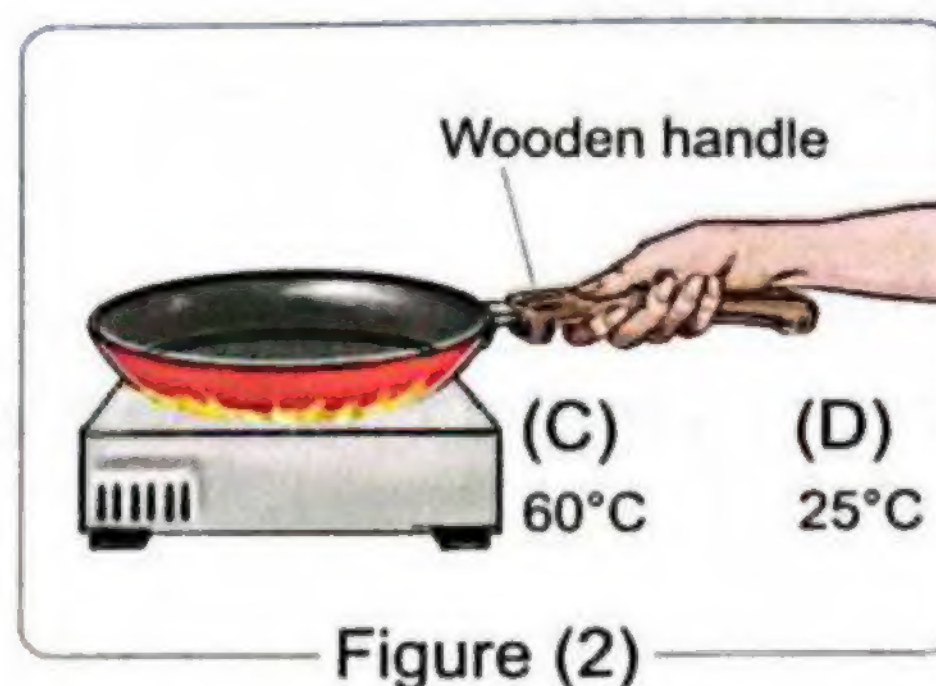


Figure (2)

- The handle in figure (.....) warms up faster than the handle in figure (.....).
- In the two figures, points (.....) and (.....) have the highest temperatures.
- In the two figures, points (.....) and (.....) have the lowest temperatures.